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## Chile

## Solid Wood Products

## Annual

## 2004

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**Report Highlights:**

Chile's forest production will continue to increase as more trees are reaching harvesting age. Exports also are expected to grow both in volume and in value in 2004, as prices for forest products are rising again.

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Includes PSD Changes: Yes  
Includes Trade Matrix: Yes  
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## Executive Summary

Total output of Chile's forest sector grew again in 2003, but the area devoted to commercial forestry fell after many years of constant expansion by over 70,000 hectares in 2003. Exports increased from \$2.30 billion in 2002 to \$2.52 billion in 2003. The increase in productivity was due to a larger foreign demand.

For 2004, both the volume and value of total forest production and exports is expected to continue growing, as prices for products like lumber, boards, moldings and wood chips are recovering.

Development of Chile's forest products sector has occurred mainly through expanded commercial planting, with excellent adaptation of radiata pine and eucalyptus. Future growth will depend on developing the relatively untouched and unmanaged native forests in southern Chile. However, this is contingent on the proposed native forest legislation, which has been stalled for several years.

## Forest Situation

There are three main forestry production areas in Chile: 1) the area between Regions VI (Rancagua) and VIII (Concepcion-Los Angeles) where radiata pine and eucalyptus are predominant; 2) Regions IX (Temuco) and X (Osorno/Puerto Montt) which contain both native forests and plantations (radiata and, more recently, eucalyptus); and 3) Chile's extreme southern Regions (XI and XII), which contain mostly native forests (lenga).

Although 119,496 hectares were planted in CY2003, total planted area nationwide fell by 76,081 hectares. Of the total planted area in 2003, a little over 56,000 hectares corresponded to new-planted area and almost 63,000 hectares were reforested. Total yearly-planted area has increased again after some years of a slowdown due to a number of factors, including less favorable planting and tax incentives under the new forestry law (DL 701), the high cost of land relative to neighboring countries, and the disruptive activities of ecologists. Nevertheless, total forest production will continue to expand as private tree farms reach harvestable age.

Chile's development of an important forest products sector is due to a great degree on the success of the radiata pine. The radiata matures in 20-24 years in Chile (with thinning available for use after just 15 years), compared to 30 years in New Zealand and Australia, and 40-60 years in North America and Europe. Since the pine grows so quickly in Chile, the wood is very soft and is most suited for wood pulp, lumber and fiberboards.

Tale 1 - Annual Coniferous Growth Rate	
Country	Growth Rate (CUM/ha/yr)
Chile	24.0
New Zealand	20.0
United States	3.0
Sweden	2.9
Canada	2.2

Table 2 - Total Chilean Radiata Pine and Eucalyptus Planting December 2003 (In Hectares)		
Region	Eucalyptus	Radiata Pine
I (Northern border)	240	-
II	2	-
III	1,182	1
IV	1,814	6
V	48,194	14,697
Metropolitan	11,069	992
VI	33,059	70,711
VII	17,865	358,052
VIII	161,608	607,075
IX	105,808	277,384
X	55,865	117,496
XI	-	-
Total *	436,706	1,446,414
* Limited planting exists in Regions XI and XII		
Source: Chile's Forestry Institute (INFOR)		

<b>Table 3 - Radiata Pine: Distribution by Age</b> (Hectares)					
Age in Years	1965	1980	1990	2000	2003
0-5	19,663	303,994	325,626	433,861	346,014
6-10	52,612	192,220	344,426	276,435	357,062
11-15	86,233	76,959	369,240	319,025	319,067
16-20	69,858	51,974	142,772	297,982	238,975
21-25	27,003	44,655	40,307	120,231	141,500
26-30	4,395	33,898	10,363	17,742	35,454
31 or more	921	13,239	9,365	8,841	8,353
Source: Chile's Forestry Institute (INFOR)					

Eucalyptus is the second largest planted species in Chile. Planting has increased at a more rapid pace than for radiata during the last few years. Eucalyptus products command higher prices and can be harvested even sooner than radiata pine. By December 2003, over 430,000 hectares had been planted. Eucalyptus has great potential in Chile since it can be harvested after only 10 to 15 years. The growth capacity for Eucalyptus is up to 30 cubic meters per hectare per year.

Present estimates put total native forests at 13.5 million hectares. Out of this total, 4 million hectares are protected as forest reserves and 5 million belong to private enterprises and are under protection. Additionally, according to industry, an estimated 4 million hectares are considered to be productive. The utilization of the mostly over-mature native forest consists primarily of selective cutting, mainly for wood chip production. Chilean native forests possess numerous tree species that have no known European or North American counterpart.

<b>Table 4 – Strategic Indicator Table: Forest Area (million hectares/million cum)</b>			
Country: CHILE	Previous	Current	Next
Report Year: 2003	Calendar Year	Calendar Year	Calendar Year
Total Land Area	75.7	75.7	75.7
Total Forest Area	15.5	15.4	15.5
--of which, Commercial	2.1	2.0	2.1
----of commercial, tropical hardwood	0	0	0
----of commercial, temperate hardwood	0	0	0
----of commercial, softwood	1.5	1.4	1.4
--of forest area, non-commercial			
Forest Type			
--Of which, virgin	13.4	13.4	13.4
--Of which, plantation	2.1	2.0	2.1
--Of which, other commercial (regrowth)	n/i	n/i	n/i
Forest Ownership			
--Nationally owned and no commercial access	9.0	9.0	9.0
--Nationally owned, commercial logging permitted	4.4	4.4	4.4
--Other publicly owned land, no commercial access	n/i	n/i	n/i
--Other publicly owned, logging permitted	n/i	n/i	n/i
--Privately owned commercial forest	2.1	2.0	2.1
Total Volume of Standing Timber			
--Of which, Commercial Timber	166.4	170.7	172.9
Annual Timber Removal	25.5	27.5	28.7
Annual Timber Growth Rate	29.8	29.7	30.0
Annual Allowable Cut	n/i	n/i	n/i

### Forest Subsidy Program

Law Decree (DL) 701, which is mainly designed to assist small farmers, subsidizes planting costs by as much as 90 percent for the first 15 hectares and 75 percent of plantings thereafter. It also subsidizes 15 percent of the planting costs for larger farmers, when they plant land that has been severely eroded or land that can only be used for reforestation. A maximum of \$15 million dollars yearly is destined for this purpose. Special land tax exemptions are also part of the program. During 2003, over 32,000 hectares qualified for the planting subsidy, with payments totaling \$13.8 million. Only 27.5 hectares qualified for trimming subsidy during 2003, with payments of \$339 thousand. There are no subsidies for forest management. During the life of this program, from 1974 to the end of 2003, the Chilean government has paid \$235.6 million in subsidies.

<b>Table 5 - DL - 701 Payment Summary</b>			
	Subsidy Amounts (US\$ Million)		Area Subsidized (Hectares)
	Period	Total	Total
Trimming	1983-03	13.1	407,425
Management	1978-03	28.2	7,108,259
Reforestation	1976-03	194.3	1,125,383
Source: Chile's Forestry Institute (INFOR).			

### Native Forest

A "new" proposal, called "Law for the Recovery and Promotion of the Native Forest" has been sitting in Congress since 1992. The bill has gone through lengthy discussions and still has not been approved, mainly due to differing views among the various government agencies involved. This law is expected to provide a framework for the sustainable management of Chile's extensive native forests. Industry contacts forecast the law to be finally approved by 2005.

By the end of CY2003, Chile's largest forest companies and ecological groups led by Forest Ethics, made a public and historic agreement to protect Chile's native forest. This agreement put an end to two years of difficult negotiations between the parties. Reportedly Chile is the second country after Canada to sign an agreement and it implies a change in the future of Chilean native forest by not replacing native harvested forests with exotic species, as has been happening up until now.

Another new development is a new Chilean certification program, CERTFOR offered by Fundacion Chile. CERTFOR has been officially recognized as a non-European certifying program by the largest certification program (PEFC) in which most countries participate. Chilean products certified by CERTFOR can use the PEFC seal, which assures favorable market access in Europe, the United States and Japan.

Table 6 – Strategic Indicator: Wood Products Subsidies			
Country: CHILE	Previous	Current	Next
Year of Report 2004	Calendar Year	Calendar Year	Calendar Year
Total Solid Wood Export Subsidy Outlay (\$US million)	0	0	0
Is there a ban on the export of logs, lumber, or veneer? If yes, which?	No	No	No
Are there export taxes (yes/no)? 1/	No	No	No
If yes, for which products? (Identify export tax level in tariff table)			
Source(s) of Export Subsidy Information	Prochile	Prochile	Prochile
Total Wood Production Subsidy Outlay (\$US million)			
Are there any programs favoring the development of commercial forestry?	Planting subsidy	Planting subsidy	Planting subsidy
If yes, Post best estimate of scope (thousands of hectares)	27.6	32.5	30.0
If yes, Post's best estimate of financial outlay (\$US million)	10.4	13.8	12.7
Source(s) of Production Subsidy Information	INFOR	INFOR	INFOR
Does the country support export expansion activities similar to the Cooperator Program?	Yes	Yes	Yes
-- Which country markets are targeted?	w/FTA mainly	w/FTA mainly	w/FTA mainly
-- Which products are targeted?	Depends on the market	Depends on the market	Depends on the market
Are there significant wood products export expansion activities at the provincial or regional level?	No	No	No
-- If yes, identify key players			
-- If yes, identify key market segments			
-- If yes, identify key country markets			
-- If yes, identify key products			
-- Post's estimate for combined outlay (\$US million)			
Source(s) of Provincial/Regional Support Information			
Are there other wood products export expansion activities? If yes, describe in report. 1/	Yes	Yes	Yes

1/ Prochile has marketing promotion activity directed to all sectors. But not widely used by forestry sector. These activities compete with others sector's activities for funds on a project-by-project basis and are co financed by the industry.



## Trade Policy

Chile has signed trade agreements with many countries, among them Mexico, Canada, EU, US, So. Korea and EFTA. Some of these are not Chile's most important forest products trading partners. Others had low tariffs for wood and wood products before the agreements were signed. As a result no significant changes will occur as a result of these agreements. In the case of South Korea, most forest products, which face a 5 to 8 percent tariff, will have a 5 to 10 year phase in for the tariff elimination.

Nevertheless, the forest industry is optimistic on new agreements, which are presently in the pipeline, like the ones with China and India. They expect a total reduction of duties for all forestry products exported to those markets.

## Forest Production

Total log production increased again to 39.1 billion CUM in 2003, up from 37.8 billion in 2002. Signs of global economic recovery, mainly in South East Asia and China, together with an improvement in the Chilean economy explains another year of expansion. Continued expansion is expected in 2004, as more tree farms reach maturity and are harvested. Additionally, industry contacts forecast a slight, but positive increase in demand for higher value added forest products.

Around 70 percent of round wood output is used by the forestry industry. The remainder is used for firewood. Commercial utilization of logs includes pulp, wood chips, sawn wood and lumber production. At least one half of Chile's population uses firewood in their homes for heating and cooking purposes.

Tree farm thinning is the main source of wood for pulp logs. Wood chips are the main by-products of sawmill operations.

<b>Table 7 - Chile: Log Production</b>			
	Forest Area (Thousand Ha.)		Log Harvest (1,000 M3)
	Planted	Native	
1995	1,818	7,493	34,956
1996	1,836	7,123	33,388
1997	1,882	7,123	34,056
1998	1,914	7,123	31,672
1999	1,952	7,123	33,972
2000	1,989	13,404	36,568
2001	2,037	13,404	37,789
2002	2,074	13,404	37,791
2003	1,998	13,404	39,132
Source: Chile's Forestry Institute (INFOR)			

## Forestry Trade

### Exports

In 2003, Chile's forest product exports totaled \$2.52 billion, up from \$2.30 billion the year before. This amount represents 12 percent of total Chilean exports. As the global economy shows signs of recovery and a new plant of wood pulp started operations at the beginning of 2004, the forest industry forecasts a further expansion to \$2.8 billion for this year. Industry sources indicate that new investments in the forestry sector are a sign of an expected recovery in the export market. The two largest forestry consortiums CMPC and the Angelini Group, plan to invest almost US\$1 billion in CY2004.

The U.S. is Chile's largest export market, accounting for over 25 percent of total exports, followed by Japan with 10 percent of total exports. Exports to Mexico have almost doubled in 2 years as a result of the zero duty all Chilean forest products face in that market.

Industry sources report that forestry exports could reach US\$6 billion by 2010.

<b>Table 8 - Chile's Forestry Export by Destination</b> (US\$ Million, FOB)			
Country	2001	2002	2003
United States	512.0	622.1	642.3
Japan	274.7	222.7	259.2
China	241.0	219.3	230.5
Mexico	94.6	152.8	179.0
Italy	91.4	108.2	120.0
Netherlands	90.8	78.2	98.4
South Korea	75.2	87.6	95.3
Others	833.2	803.7	899.2
Total Exports	2,205.6	2,301.1	2,524.0
Source: Chile's Forestry Institute (INFOR).			

<b>Table 9 - Chile's Forest Product Export by Major Commodity</b> (US\$ Million, FOB)			
Commodity/Product	2001	2002	2003
Sawn wood	178.8	207.3	275.0
Wood Chips	148.1	122.6	130.1
Plywood and Boards	144.6	166.2	199.0
Round Wood Logs	26.3	24.6	13.0
Other	733.6	869.8	932.0
Total Forest Product Exports	1,231.9	1,390.5	1,549.1
Wood Pulp	863.2	821.8	881.9
Newsprint	110.5	88.8	93.0
Total Forest Sector Exports	2,205.6	2,301.1	2,524.0
Source: Chile's Forestry Institute (INFOR).			

## Imports

Chile's forest product imports totaled \$565 million in 2003, up from \$531 million in 2002. For 2004, another expansion of imports is expected as the Chilean economy keeps growing mainly in the construction sector.

Chile has an across the board import duty of 6 percent. Additionally Chile has signed free trade agreements with several countries, among them: Mexico Venezuela, Colombia and Ecuador. All wood product imports from these countries are duty free. Additionally, imports from the United States and Mercosur countries are also mostly duty free.

Most imports come from Brazil (18 percent), Argentina (17 percent) and the United States (9 percent). Paper, cartons and other manufactured products are the main imported products (68 percent), followed by furniture and parts (6 percent), cork (6 percent) and barrels (4 percent).

A new regulation, which deals with wood used as packing material is in the process of being implemented. The proposed regulation is expected to come into effect June 1, 2005. It adds new procedures and treatments for wood used as packing material in addition to the requirements from resolution No.1826 from 1994. For example the wood must be heat treated and certified, as well as free of bark. These requirements do not apply for packing material made out of particleboards.

Table 10 – Strategic Indicator Table: Forest Product Tariffs and Taxes						
Country: CHILE						
Report Year: 2004	Description 1/	Tariff Current Year	Tariff Following Year	Other Import Taxes/Fees	Total Cost of Import	Export Tax
4401		6	6	0	6	0
4403		6	6	0	6	0
4404		6	6	0	6	0
4405		6	6	0	6	0
4406		6	6	0	6	0
4407		6	6	0	6	0
4408		6	6	0	6	0
4409		6	6	0	6	0
4410		6	6	0	6	0
4411		6	6	0	6	0
4412		6	6	0	6	0
4413		6	6	0	6	0
4414		6	6	0	6	0
4415		6	6	0	6	0
4416		6	6	0	6	0
4417		6	6	0	6	0
4418		6	6	0	6	0
4419		6	6	0	6	0
4420		6	6	0	6	0
4421		6	6	0	6	0
4422		6	6	0	6	0
4423		6	6	0	6	0
4424		6	6	0	6	0
4425		6	6	0	6	0
Pre-fabricated Houses, a subsection under chapter 96		6	6	0	6	0

## Wood Chips

Wood chip output in 2003 expanded slightly when compared to the previous year. A recovery of the Japanese economy, together with increased wood pulp prices explains this expansion in wood chip production and exports. Another moderate expansion is expected for 2004. Additionally, more eucalyptus trees are ready for harvest so output of eucalyptus wood chips is expected to increase.

<b>Table 12 - Chile's Wood Chip Production</b> (In Thousand Metric Tons)				
Year	Total	Radiata Pine	Native	Eucalyptus
1996	4,996	2,373	1,757	857
1997	4,926	2,199	1,791	935
1998	4,487	2,031	1,338	1,112
1999	4,837	2,241	1,016	1,544
2000	5,091	2,380	719	1,968
2001	5,257	2,372	386	2,464
2002	5,057	2,527	156	2,375
2003	5,691	2,874	5	2,810
Source: Chile's Forestry Institute				

Chile has a large number of chipping facilities with widely varying capacities. Most facilities are located in Region VIII (Concepcion). Over 50 percent of Chile's wood chip production is exported and all of it goes to Japan's paper and pulp industries.

<b>Table 13 - Chile's Wood Chip exports for 2003</b>			
Type	Volume Thousand MT	Value Million US\$	Unit Value US\$/MT
Radiata Pine	73.2	1.9	26
Eucalyptus	2,777.3	128.2	46
Native Forest	0.0	0.0	0
Total	2,850.5	122.6	
Source: Chile's Forestry Institute (INFOR)			

PSD Table							
Country	Chile						
Commodity	Wood Chips				(1000 MT)		
	2003	Revised	2004	Estimate	2005	Forecast	UOM
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	
Market Year Begin		01/2003		01/2004		01/2005	MM/YYYY
Production	5280	5690	5545	6050	0	6200	(1000 MT)
Imports	0	0	0	0	0	0	(1000 MT)
TOTAL SUPPLY	5280	5690	5545	6050	0	6200	(1000 MT)
Exports	2915	2850	2950	2990	0	3020	(1000 MT)
Domestic Consumption	2365	2840	2595	3060	0	3180	(1000 MT)
TOTAL DISTRIBUTION	5280	5690	5545	6050	0	6200	(1000 MT)

Export Trade Matrix			
Country	Chile		
Commodity	Wood Chips		
Time Period	Jan-Dec	Units:	M.T.
Exports for:	2002		2003
U.S.	0	U.S.	
Others		Others	
Japan	2512050	Japan	2811200
Spain	39831	Spain	39333
Total for Others	2551881		2850533
Others not Listed	0		0
Grand Total	2551881		2850533

## Softwood Logs

Total softwood log production expanded again in 2003. In 2004, expansion will continue as a larger number of trees are going to be available for harvest. Most softwood logs are for pulp and exported to Japan. Only small amounts of softwood logs for lumber are exported to South Korea. As soft wood logs for pulp are exported only to Japan, future exports are tied to the performance of the Japanese economy.

Table 14 - Average Softwood Log Prices (US\$ per CUM)								
	1980	1990	1998	1999	2000	2001	2002	2003
Export	54	49	52	49	46	48	47	46
Domestic	18	33	39	35	37	31	28	27
CH\$/US\$	39.0	304.9	460.0	508.9	539.5	634.9	688.9	691.4
Source: Chile's Forestry Institute (INFOR)								

PSD Table							
Country	Chile						
Commodity	Softwood Logs				1000 CUBIC METERS		
	2003	Revised	2004	Estimate	2005	Forecast	UOM
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	
Market Year Begin		01/2003		01/2004		01/2005	MM/YYYY
Production	14400	15051	15500	16200	0	17500	1000 CuM
Imports	0	0	0	0	0	0	1000 CuM
TOTAL SUPPLY	14400	15051	15500	16200	0	17500	1000 CuM
Exports	185	173	180	295	0	320	1000 CuM
Domestic Consumption	14215	14878	15320	15905	0	17180	1000 CuM
TOTAL DISTRIBUTION	14400	15051	15500	16200	0	17500	1000 CuM



Export Trade Matrix			
Country	Chile		
Commodity	Softwood Logs		
Time Period	Jan-Dec	Units:	CuM
Exports for:	2002		2003
U.S.	6050	U.S.	0
Others		Others	
Japan	136944	Japan	147954
So. Korea	132978	So. Korea	25043
Spain	24		
Total for Others	269946		172997
Others not Listed	0		0
Grand Total	275996		172997

## Softwood Lumber

Although declining in importance relative to other sectors in the forest industry, saw milling is still the single largest consumer of logs, with pine logs making up close to 80 percent of total inputs. Close to a third of the lumber produced is exported. This is mostly the output from the larger state of the art sawmills. The remaining two-thirds is consumed locally.

Production of softwood lumber is expected to keep growing in the next few years as availability of well-managed and knot-free trees increases. But exports are not expected to grow at the same rate, as the industry is trying to add value to its output by increasing its exports of manufactured wood products. However, in the long term, exports of softwood lumber should rise as the availability of knot-free lumber increases. The increased availability of knot-free lumber is attributed to subsidized pruning and forest management under DL 701, until the late nineties.

Softwood lumber expanded again in 2003, compared to the previous year, as a result of strong foreign demand. For 2004 and 2005, production is expected to increase as the availability of mature trees increases and investment in new milling facilities materialize.

**Table 15 - Average Softwood Lumber Prices**  
(US\$/CUM)

	1980	1990	1998	1999	2000	2001	2002	2003
Export	113	126	146	136	137	127	129	130
Domestic	76	55	90	80	76	61	57	58
CH\$/US\$	39.0	304.9	460.0	508.9	539.5	634.9	688.9	691.4
Source: Chile's Forestry Institute (INFOR).								

PSD Table							
Country	Chile						
Commodity	Softwood Lumber				1000 CUBIC METERS		
	2003	Revised	2004	Estimate	2005	Forecast	UOM
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	
Market Year Begin		01/2003		01/2004		01/2005	MM/YYYY
Production	7347	6758	8400	7970	0	8770	1000 CuM
Imports	0	0	0	0	0	0	1000 CuM
TOTAL SUPPLY	7347	6758	8400	7970	0	8770	1000 CuM
Exports	2880	2289	3310	2700	0	2970	1000 CuM
Domestic Consumption	4467	4469	5090	5270	0	5800	1000 CuM
TOTAL DISTRIBUTION	7347	6758	8400	7970	0	8770	1000 CuM

Export Trade Matrix			
Country	Chile		
Commodity	Softwood Lumber		
Time Period	Jan-Dec	Units:	CuM
Exports for:	2002		2003
U.S.	418712	U.S.	370374
Others		Others	
Mexico	398964	Mexico	536483
Japan	349179	Japan	380122
Saudi Arabia	171922	Saudi Arabia	179202
AU Emirates	145316	UA Emirates	173617
Taiwan	81796	Taiwan	86485
Spain	74658	China	84054
China	69643	Morocco	77760
Morocco	52241	Spain	71151
So. Korea	40363	So. Korea	46506
Costa Rica	30577	Kuwait	37212
Total for Others	1414659		1672592
Others not Listed	223874		245704
Grand Total	2057245		2288670